

City of Bethlehem

Vision Zero

Action Plan 2016



City of Bethlehem's Plan to End Traffic Deaths and Serious Injuries by 2030

Robert Donchez, Mayor

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Table of Contents

I.	Letter from the Mayor.....	2
II.	Introduction	3
III.	Vision Zero Saves Lives.....	4
IV.	Vision Zero Action Plan.....	5
V.	CTAC Accomplishments	6
VI.	City of Bethlehem Trends.....	7-11
VII.	Speed Matters.....	12-13
VIII.	City of Bethlehem's Short Term Vision Zero Strategy.....	14
IX.	City of Bethlehem's Long Term Vision Zero Strategy.....	15
X.	Evaluation.....	16
XI.	Conclusion.....	17



Letter from the Mayor

Dear City of Bethlehem Residents and Visitors,

Any life lost to traffic crashes is unacceptable. It is our collective responsibility to save every life we can. I am making a commitment to Vision Zero to definitively defy the epidemic of traffic fatalities and injuries on our city streets. This action plan will detail how we will overcome this immense task of reducing injuries and fatalities among pedestrians, bicyclists, motorcycles and motor vehicles.

The ultimate message of Vision Zero is that death and injury on city streets is not acceptable and that we will no longer repute serious crashes as inevitable. These tragedies that happen in our city affect our families from every sector of life. They happen to people who drive and to those who bike, but overwhelmingly, the deadly toll is highest for pedestrians – especially our seniors and children.

Families, community groups and advocates who have lost loved ones have proven that we can change hearts, minds and behaviors. Social norms have changed the once accepted drunk driving and failure to use seatbelts to being socially unacceptable behavior. By embracing Vision Zero, we can promote the same passion against dangerous and careless driving on our streets.

Better designs, collaborative planning and road improvements are already making our City safer and we will magnify these efforts. We will escalate our focus on education and enforcement and changing the environment. WE will save lives together. These efforts will begin today and its successes will depend on every resident of the City of Bethlehem joining us in the changing of behaviors to make the streets of the City of Bethlehem safer.

We would like your ideas on improving street safety, identifying problematic locations and provide potential solutions. We are asking for your support and collaboration in this initiative as the City and our partners take action to reduce injuries and fatalities on our city streets.

Together, we will save lives.



Robert Donchez
Mayor



Introduction

The primary mission of government is to serve and protect the public. City of Bethlehem residents deserve and expect safe streets. In 2015, approximately 4000 City of Bethlehem residents and visitors were involved in a crash and 4 were killed. On average, a city resident or visitor is involved in a crash every 2 hours.

This status quo is unacceptable. The City of Bethlehem must no longer regard traffic crashes as mere “accidents”, but rather as preventable incidents that can be systematically addressed. No level of fatality on City streets is inevitable or acceptable. This Vision Zero Action Plan is the City’s foundation for ending traffic deaths and injuries on our streets.

The City will use every tool at its disposal to improve the safety of our streets. With this action plan, the City is making a bold new commitment to improve street safety with expanded enforcement against dangerous moving violations like speeding and failing to yield to pedestrians, new street designs and configurations to improve safety and broad community education.

There is no magic solution that will end traffic fatalities. Previous successes that have combined the efforts of people, their government and private industries to save lives are not difficult to find. In 1985, our National seatbelt rate was 20%. As of 2015, results from education, enforcement and new engineering designs, has increased seatbelt use rates to 88%. WE must apply similar focus to the more complex equation of safety on city streets. The City of Bethlehem is up to the challenge!

Traffic fatalities in the City of Bethlehem have fallen significantly over time. It will take government, grassroots organizations, and citizens to work together to make the changes. The promise of Vision Zero will require constant input and feedback from citizens and community based organizations. Vision Zero also needs each and every City of Bethlehem resident to become aware for the new public discourse on street safety, to appreciate the consequences of careless and dangerous behavior and to do their part to lend civility and consideration to the daily life and rhythm on the streets of our city.

The Action Plan is only a beginning. It defines the initial steps that the City and collaborative partners will take to reduce deaths and serious injury on our streets. These initiatives will be continually analyzed for their effectiveness.

The Citizen’s Traffic Advisory Committee (CTAC) will be the Vision Zero taskforce, comprised of the health department, police, planning, traffic engineering, planning commission, PENNDOT, Lehigh Valley Health Network Trauma Prevention Program, Coalition for Appropriate Transportation, Environmental Advisory Council and residents. CTAC, as the Vision Zero taskforce will work to meet the goals set forth in this action plan.



Bethlehem has unlimited potential. Vision Zero is a critical effort to ensure that Bethlehem residents are able to realize lives of health and opportunity without catastrophic interruption by careless and preventable traffic incidents. Together, we can make Bethlehem's streets the safest streets in the Lehigh Valley!

Vision Zero Policies Save Lives

Vision Zero is a multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries in road traffic. It started in Sweden and was approved by their parliament in October 1997. A core principle of the vision is that *Life and health can never be exchanged for other benefits within the society* rather than the more conventional comparison between costs and benefits, where a monetary value is placed on life and health, and then that value is used to decide how much money to spend on a road network towards the benefit of decreasing risk.

Vision Zero is based on the following four principals: 1) Ethics: Human life and health are paramount and take priority over mobility and other objectives of the road traffic system; 2) Responsibility: providers and regulators of the road traffic system share responsibility with users; 3) Safety: road traffic systems should take account of human fallibility and minimize both the opportunities for errors and the harm done when they occur; and 4) Mechanisms for change: providers and regulators must do their utmost to guarantee the safety of all citizens; they must cooperate with road users; and all three must be ready to change to achieve safety.

The following principles were added to Vision Zero in order to ensure that motorists would comprehend the full extent of the movement's purpose: traffic deaths and injuries are preventable; therefore, none are acceptable; people will make mistakes; the transportation system should be designed so those mistakes aren't fatal; safety is the primary consideration in transportation decision-making; traffic safety solutions must be addressed holistically.

Vision Zero programs combine strong enforcement and better roadway engineering with high visibility behavior campaigns to discourage dangerous behavior on roadways. Vision Zero policies raise the bar on traffic safety problems and help transform culture and attitudes toward traffic death and injury. Rather than accepting traffic deaths and injuries, Vision Zero advocates for the community to work together to understand traffic crashes, develop improvement solutions and educate the public.

By working together, Vision Zero provides government with a structure and visualization that reduces traffic fatalities and injuries. Vision Zero makes these goals realistic and possible. The City of Bethlehem is confident that by implementing the Vision Zero concept, we can make the streets of Bethlehem safer for all!

Action Plan



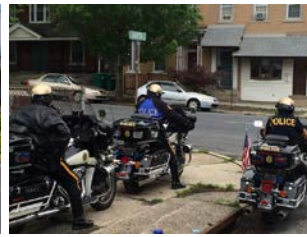
City Hall

- Support the Vision Zero Taskforce
- Make Vision Zero part of the City's Continuous Improvement plan
- Create a Vision Zero Website and gather insight from the community
- Publish crash and safety data on the Vision Zero website
- Safe Vehicular Bicycle use training for City Employees



Health Bureau

- Continue with Vision Zero Taskforce
- Conduct public outreach and education aimed at speeding, aggressive driving, failure to yield and reckless driving
- Conduct public health surveillance on traffic-related injuries and fatalities
- Collect public health data to focus on specific traffic safety interventions
- Engage community based organizations in promoting Vision Zero goals
- Promote education on being a safe pedestrian, bicyclist, operating a motorcycle and motor vehicle



Police

- Increase enforcement against dangerous moving violations: speeding, failing to yield to pedestrians, signal violations, improper turns, distracted driving, aggressive driving, impaired driving



Traffic Engineering

- Implement safety engineering improvements at high risk intersections and corridors
- Enhance street lighting
- Enhance maintenance of street markings
- Install crosswalks, stop signs and traffic signals where needed
- Upgrade old traffic lights to the larger LED lights and assess the need for back plates to make the traffic signal more visible
- Implement "Lead pedestrian intervals". It gives the pedestrian a head start so they are visible in the crosswalk before the driver starts moving-making the pedestrian more visible in the crosswalk.



Planning

- Adopt a complete streets resolution
- Incorporate complete streets into improvement plans
- Implement road designs
- Implement a pedestrian and bicycle wayfinding system



Partners

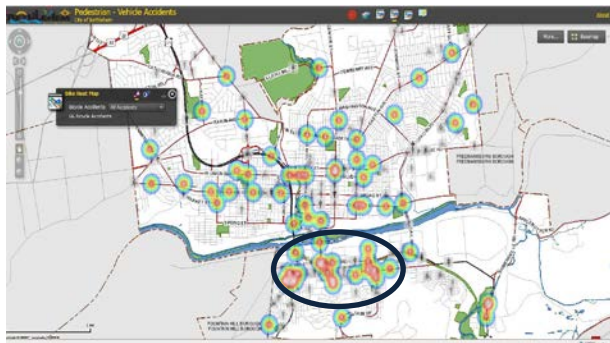
- ✓ Collaborate to implement a public safety campaign
- ✓ Provide bicycle and pedestrian education for youth and adults
- ✓ Continue to offer a bicycle diversion program
- ✓ Invest in a Bike Share program
- ✓ Promote Bike and Walk to School/Work days
- ✓ Provide input on plans in the design and construction phase

2015 CTAC Accomplishments

- ✓ Started Vision Zero discussions
- ✓ Speed enforcement around Fahy Bridge
- ✓ Completion of sidewalks on Schoenersville Rd.
- ✓ Installed Yield to Pedestrian sign at 3rd and Broad Street, Saxon Plaza
- ✓ Applied for funding – ARLE grant (crosswalk at North end of Fahy Bridge), TAP funding (replace handicap ramps on 4th street), Wayfinding signs for Greenway
- ✓ Conducted Pedestrian Enforcement Program - Center/North Sts. , New/Fairview Sts., Carlton/Broadway, Elizabeth Ave @ Moravian College, Broad St./12th Ave. and Broad St. /2nd Ave.
- ✓ Installed Shared Lane Markings on Broad St. and re-furbished existing ones.
- ✓ Investigated Crosswalk problem area of motor vehicles not yielding to pedestrians in the crosswalk at Westgate Dr. and Bathgate Dr. and traffic related issues of cars not stopping at the stop sign, speed and minimal sight distance at curb cuts.
- ✓ Applied for funding to pilot a pedestrian program at the Pennsylvania Playhouse.
- ✓ Trimmed trees to make visible Pedestrian Crossing Signs, traffic signals and Stop signs.
- ✓ Track and map on GIS Pedestrian, Motorcycle and Bicycle crashes and fatalities.
- ✓ Conducted an assessment of parents dropping children off at elementary schools. Suggested changes to parent pick up and drop off procedures to minimize children running between parked cars.
- ✓ Conducted various education programs to adults, teens and children on pedestrian safety, safe driving and safe riding practices.
- ✓ Posted educational material on social media- bike to work day, Pedestrian safety, safe driving, winter driving safety, tire safety, drinking and driving safety and child passenger safety.

City of Bethlehem Trends

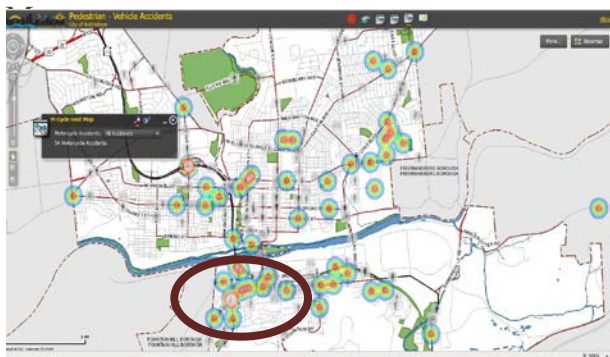
Bicycle Heat Map



Most of the bicycle crashes in Bethlehem occur in South Bethlehem on 3rd and 4th streets.

○ South Bethlehem West 3rd Street & 4th Street

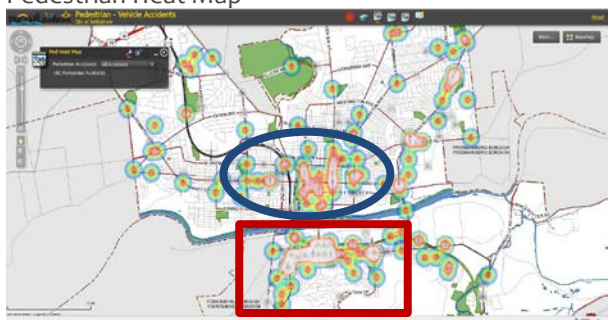
Motorcycle Heat Map Heat



The majority of motorcycle crashes occur in South Bethlehem on 4th street.

○ South 4th Street

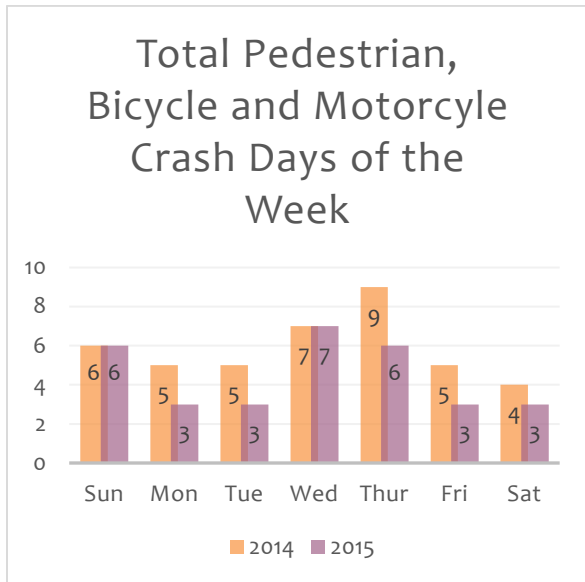
Pedestrian Heat Map



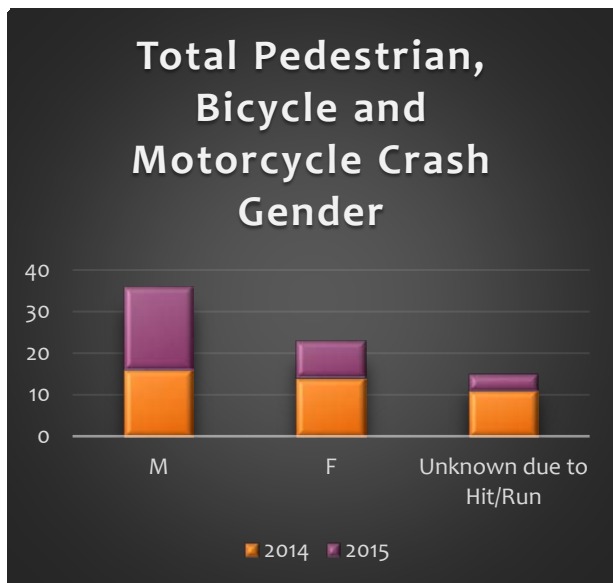
Pedestrian injury clusters occur in North Bethlehem in the downtown and in South Bethlehem's downtown area. 3rd and 4th streets are high crash roadways for persons using alternate modes of transportation.

○ North Side of District
□ Bethlehem, Historic South Bethlehem, West 3rd & 4th Street

City of Bethlehem Trends

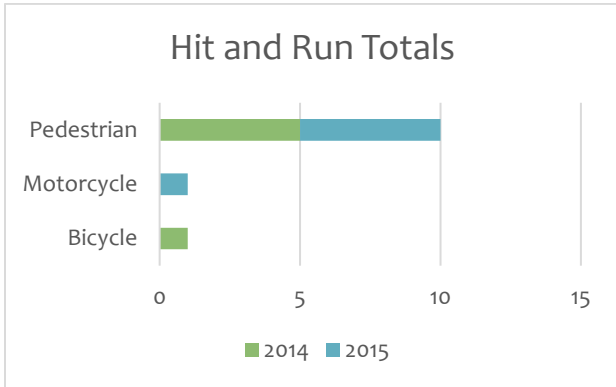


Alternate mode of transportation crashes mostly occur mid-week on Wednesday's and Thursday's.

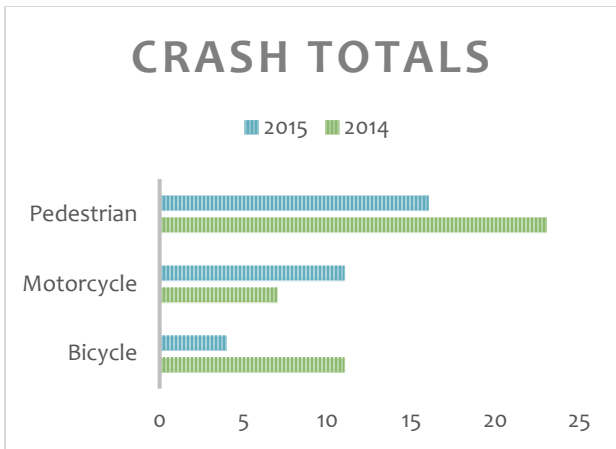


Males are more involved in alternate modes of transportation crashes.

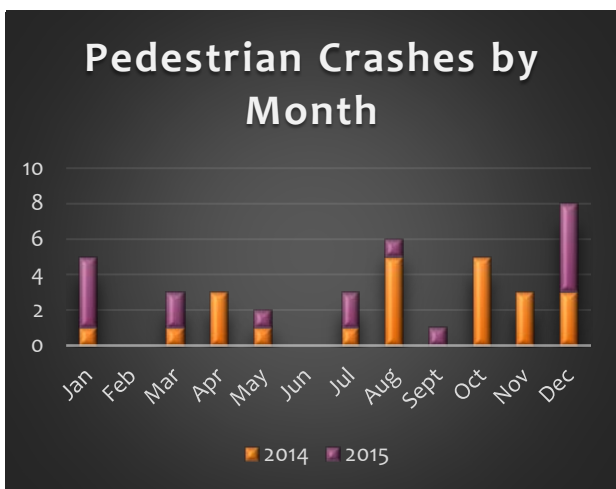
City of Bethlehem Trends



In the City of Bethlehem, more pedestrians are involved in alternate modes of transportation crashes than motorcycles or bicycles.



Pedestrians are involved in almost two times the crashes when compared to persons riding motorcycles and bicycles.

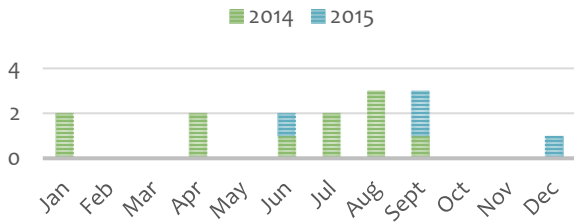


Although pedestrian crashes occur throughout the year, January, August, October and December are the months with the highest pedestrian crashes.

The City's Vision Zero plan will address how to increase pedestrian education.

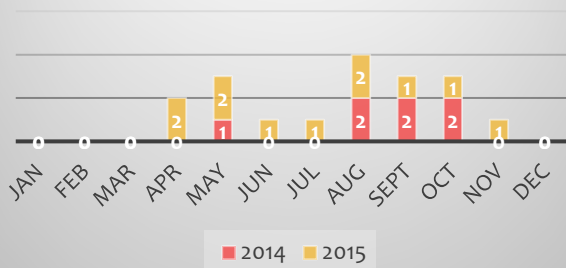
City of Bethlehem Trends

BICYCLE CRASHES PER MONTH



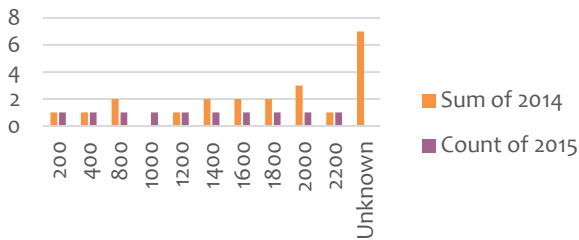
In the City of Bethlehem, bicycle crashes are sporadic but seem to mostly occur in June and September, over a two year period.

Motorcycle Crashes Per Month



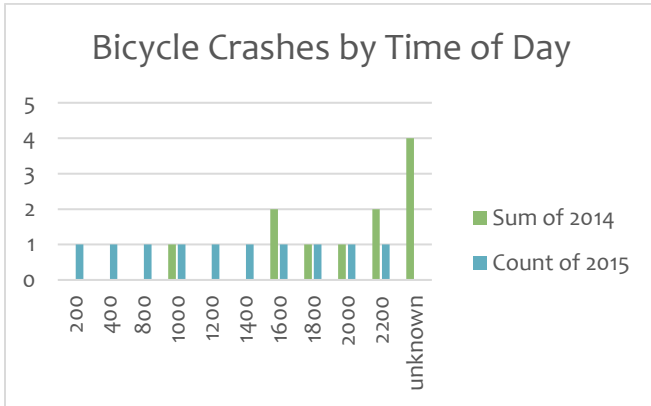
Interestingly, motorcycle crashes occur only 8 months out of the year. May, August, September and October are indicated as the high crash months. The City's Vision Zero plan will address how to reduce these crashes.

Pedestrian Crashes by Time of Day

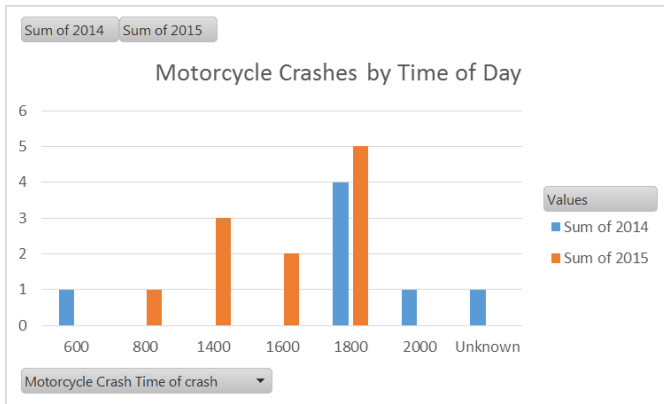


Most pedestrian crashes in Bethlehem occur in the evening between the hours of 4 pm and 10 pm. The City's Vision Zero plan will address pedestrian education concentrating on watching for pedestrians during the evening hours.

City of Bethlehem Trends

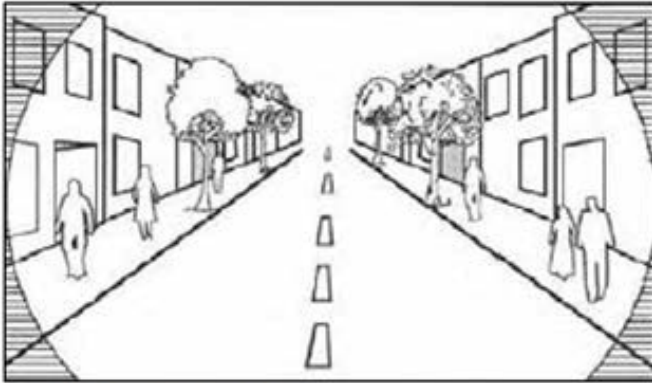


Bicycle crashes occur intermittently throughout the day and current data does not indicate any specific problem timeframe. Data will continue to be collected to gain more insight on bicycle crashes.

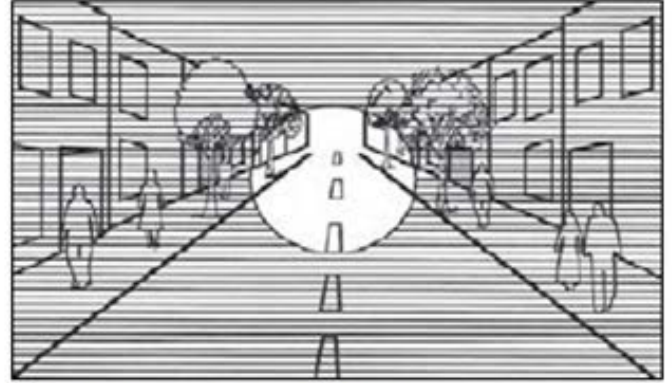


Bethlehem motorcycle crashes have the highest crash rate a 6 pm. Education and enforcement regarding motorcycles will be part of the Vision Zero plan.

Speed Matters



Field of vision at 15 MPH

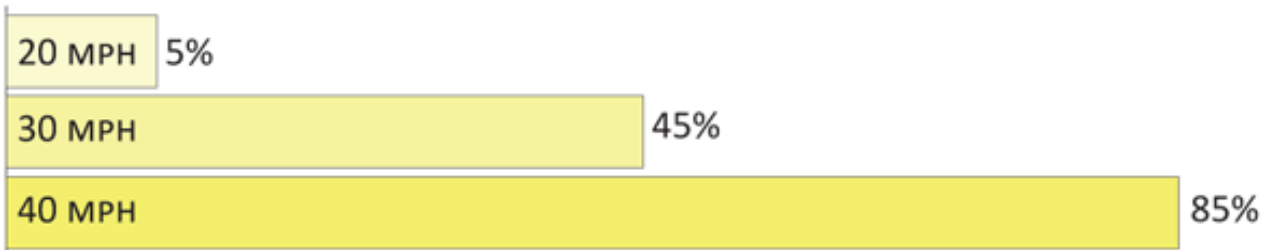


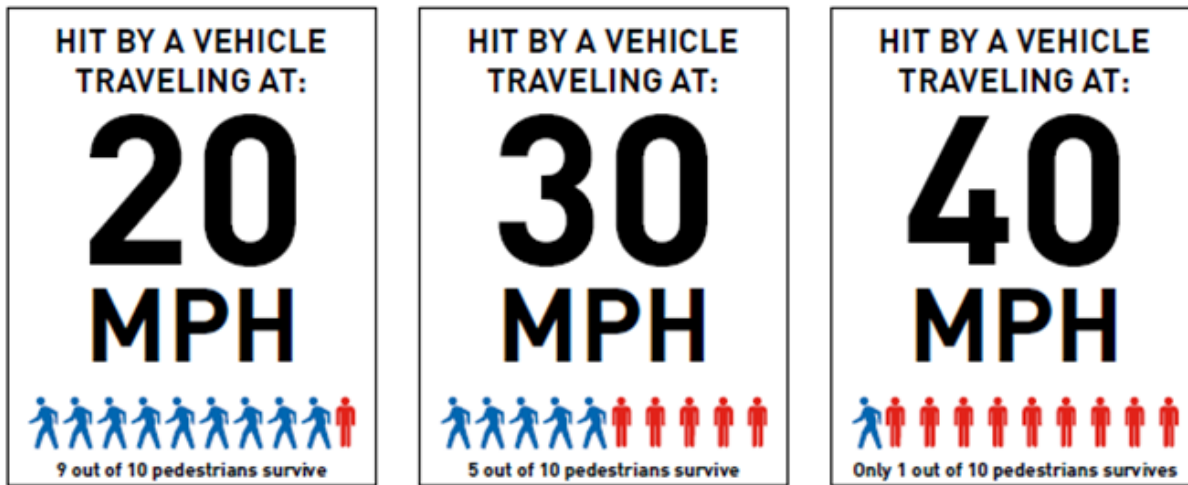
Field of vision at 30 to 40 MPH

A driver's field of vision increases as speed decreases. At lower speeds, drivers can see more of their surroundings and have more time to see and react to potential hazards.

The City of Bethlehem is known as the Christmas City and has a mix of colonial historical structures, churches, industry and educational institutions. There are over 150 festivals in Bethlehem each year; 50 festivals during the Christmas season. These festivals and events, the largest one being Musikfest, brings several million visitors to Bethlehem each year. With the countless visitors these festivals bring an increase in pedestrian traffic; thereby, increasing potential for pedestrian and motor vehicle conflicts.

% Chance of Pedestrian Fatality at a Given Motor Vehicle Speed





Speed is especially lethal for vulnerable users like pedestrians and people biking. The risk of injury and death increases as speed increases.

Through Vision Zero, the City of Bethlehem is urging motorists and pedestrians to be more cognizant and respectful of and to each other. Through this mutual respect, injuries and fatalities can be reduced and ultimately avoided. Vision Zero encourages humanity while traveling on City roadways despite the chosen mode of travel.



City of Bethlehem's Short Term Vision Zero Strategy

The City of Bethlehem's Vision program is looking forward to implementing educational, environmental changes and enforcement strategies to make a positive impact in behavior while driving, walking or biking to reduce traffic injuries and fatalities within the City of Bethlehem. This will be achieved by conducting initiatives outlined in the Action Plan through partnerships with other city departments and community based organizations, the Lehigh Valley Planning Commission and PENNDOT.

The City of Bethlehem will continue to collect data, analyze crash data and determine high crash corridors. PENNDOT's Crash Data Tool, City of Bethlehem's New World Record management system and GIS will all be used to track, map and analyze crash data. These corridors will then be analyzed and solutions for improvement will be created.

Education will be a key component for all initiatives. Enforcement will be requested as needed to ensure compliance to the safety changes and focus on behaviors that endanger our most vulnerable roadway users. The City of Bethlehem will work with partners to reach people of all ages and abilities through education programs and Vision Zero campaign.

The City of Bethlehem will reduce serious and fatal crashes by working towards our 2030 goal. The City of Bethlehem will address the issues in the following three categories:

1. Environmental improvements through street design
2. Education and public engagement
3. Enforcement



As the City of Bethlehem rolls out the Vision Zero campaign, input from the community, partners, and other city departments is encouraged so that the Vision Zero plan becomes a comprehensive, ongoing plan for the entire community!



City of Bethlehem's Long Term Vision Zero Strategy

The City of Bethlehem will work towards zero crashes and injuries in the City of Bethlehem through a combination of completing short term goals and long term goals. The short term goals listed in the aforementioned section and in the Action Plan are achievable over a five year period. The following long term goals will take much longer to achieve but will have a much greater impact on our community.

The City of Bethlehem realizes that changing behavior for residents and visitors who share the roadway will take time. The City of Bethlehem will continue to focus efforts long term on enforcement, education and environmental improvements through street design but take a more systems approach long term. The long term areas of focus will include:

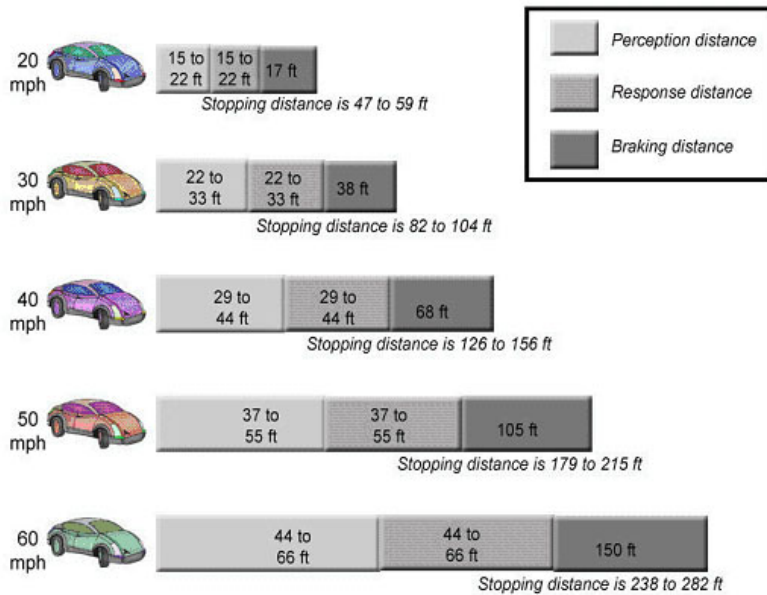
1. Pedestrian education on obeying the pedestrian crossing signals with 100% compliance.
2. Connecting the Share the Lane bicycle markings to create a biking path to encourage health and wellness activities.
3. Bicycle rider 100% compliance on following the rules of the road.
4. Motor vehicles avoid conflict with motorcycles, pedestrians or bicycles on same roadways.
5. Collaborate with PENNDOT to change the permitting system to add more education on pedestrian, bicycle and motorcycles.
6. Collaborate with PENNDOT to include education to parents in the young driver permitting process.
7. Increase the number of Park N Rides to promote use of public transportation.
8. Add bike racks on to parking meters.
9. Design an area to charge electric cars.
10. Involve Magisterial District Judges in the planning of education and enforcement programs.
11. Utilize newsfeeds to keep the middle age population abreast of new highway safety information.
12. Capture and track better data.

Evaluation

Evaluation is built into executed programs from the outset. On a yearly basis, a report will be generated on Vision Zero’s accomplishments, track trends and announce the efforts for that upcoming year. Monitoring success of Vision Zero will include:

1. Using data to monitor success of implemented programs.
2. Drilling through available pedestrian, bicycle and motorcycle data to determine root cause and fault of crash and design programs to minimize root causes.
3. Analyzing and trending crash data over time to include but not limited to: total number of crashes and fatalities, total number of crashes and fatalities among pedestrians and bicyclists, violations related to driver, pedestrian and bicyclist behaviors.

Average Stopping Distance for a Given Speed
Stopping distance = perception + response + braking distances



Conclusion

Vision Zero is an aggressive campaign that starts from the ground up. It is a lofty, yet critical goal. Our community must embrace the fact that even one traffic related death is too many. The City of Bethlehem stands behind Vision Zero and what it stands for. Through inter-government, partner and community collaborations the short term and long term goals can be met.

We all utilize the roadways in the City of Bethlehem in many different ways; however, we should all be cognizant of each other's safety and well-being. We often forget in the hustle and bustle of our busy lives that we must take the time to slow down and pay attention to the road, leave a few minutes early or accept the fact you'll be a few minutes late because that small behavior change will prevent unnecessary crashes, injuries and fatalities.

We look forward to implementing Vision Zero and creating a safer community and working with you to meet our Vision Zero goals!



